

PILLYA, A.D. [translator]; ZEL'TSER, G.I. [translator]; LEMBERG,
I.Kh. [translator]; KONSTANTINOV, O.V. [translator];
SHUT'KO, A.V. [translator]; SLIVA, L.A., red.; BURTSEV, A.K.,
red.; SOKOLOVA, T.S., tekhn.red.

[Deformation of atomic nuclei; generalized nucleus model and
the Coulomb excitation method. Articles translated from the
English] Deformatsiya atomnykh iader: obobshchennaya model'
iadra i metod kulonovskogo vozvushdeniya. Sbornik statei.
Moskva, Izd-vo inostr.lit-ry, 1958. 383 p.

(MIRA 14:5)

(Nuclear shell theory) (Nuclei, Atomic)

СИРПИК, А.В.

The statistical theory of turbulence. Dokl. AN SSSR 198 no. 5 1960
S 164. (MIR 17:10)

1. Представлено академиком М.А.Леоновичем.

SHUTKO, F.

New accounting methods. Bukhg.uchet 24 no.4:40-43 Ap '57.

(MIRA 10:12)

1. Glavnnyy bukhgalter zavoda "Tashsel'mash" imeni K.Ye.Voroshilova,
Tashkent.

(Accounting)

POL'SKIY, A.; SHUTKO, F.

Two-shift working day in a swine fattening yard. Mias. ind. SSSR
29 no.6:41 '58. (MIRA 11:12)

1. Poltavskaya oblastnaya skotozagotovitel'naya kontora.
(Swine--Feeding and feeding stuffs)

NOVAK, I.; FIALA, Ya. [Fiala, J.]; SHUTKO, Sh. [Sutko, S.]; VLCHKOVA, M.
[Vlckova, M.]; SHOUREK, I. [Sourek, J.]; SEJKOROVA, I. [Sejkorova, J.]

Some changes in the donor organism after bloodletting. Probl.
gemat. i perel. krovi 8 no.4:41-46 Ap'63 (MIRA 17:2)

I. Iz Instituta gematologii i perelivaniya krovi (dir. - prof.
Ya. Gorzheyski [Horsjsi, J.], Praga.

SHUT'KO, Viktor Mikhaylovich; KAL'NITS'KIY, R.Ya., red.; SHEVCHENKO,
M.G. [Shevchenko, M.H.], tekhn.red.

[We build dwellings for our workers] Buduiemo zhytla dla
trudiaschchykh. Kharkiv, Kharkiva'ke obl.vyd-vo, 1958. 3⁴ p.
(MIRA 13:1)

1. Brigadir kompleksnoi brigadi mulyariv-montazhnikiv budtrestu
No.87, g.Khar'kov (for Shut'ko).
(Kharkov--Construction workers)
(Labor and laboring classes--Dwellings)

SHUTKO, Yu.F. (Tashkent, ul.Yasel'naya, d.4, kv.y)

Case of rectal rupture with prolapse of the loops of the small intestine. Nov. khir. arkh. no.1:119-120 Ja-F '60. (MIRA 15:2)

1. Kafedra gospital'noy khirurgii (zav. - prof. S.A.Masumov) Tashkentskogo meditsinskogo instituta.
(RECTUM—HERNIA) (HERNIA)

KILIMOV, Sergey Leonidovich; SHUT'KO, Yuriy Petrovich

[Accelerated sinking of directional shafts] Skorostnaya prokhodka
naklonnykh stvolov. Kiev, Gos.izd-vo tekhn.lit-ry USSR, 1959.
112 p. (MIRA 13:5)

(Shaft sinking)

27178

8/057/61/031/009/018/019
B104/B102

26.2312
AUTHORS: Lebedev, S. Ya., Stavisskiy, Yu. Ya., and Shut'ko, Yu. V.

TITLE: Surface ionization of cesium during diffusion of its vapors
through porous molybdenum

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 9, 1961, 1148-1149

TEXT: The authors studied the temperature dependence of the surface ionization of cesium during diffusion of its vapors through porous molybdenum plates (thickness 1 mm, porosity 30%, dimension of pores 1μ). The temperature of the ionized surface was controlled with a thermocouple. The temperature dependence of the ion current density was studied for current densities of $0.015 - 16 \text{ ma/cm}^2$. Figs. 1 and 2 show the results. Results reveal that practically full ionization takes place during diffusion of cesium vapor through porous molybdenum or porous tungsten. Full ionization is achieved in molybdenum at much lower temperatures than in tungsten. With an ion current density of 15 ma/cm^2 , this temperature

Card 1/3

L 12040-65 EWT(1)/ENG(k)/EWT(m)/EPA(sp)-2/EPF(n)-2/EPA(w)-2/T/EWA/EWP(b) Pz-6/
Pub-10/Pu-4 IJP(c)/AFMD/C/ASD(m)-3/ASD(a)-5/ASD(f)-2/ESD(gs)/ESD(t)
ACCESSION NR: AP4045306 8/0048/64/028/009/1488/1490

AUTHOR: Lebedev, S.Ya.; Stavisskiy, Yu.Ya.; Shut'ko, Yu.Y.

TITLE: Cathode sputtering by bombardment with accelerated cesium ions Report, B
Tenth Conference on Cathode Electronics held in Kiev, 11-18 Nov 1963

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.28, no.9, 1964, 1488-1490

TOPIC TAGS: cathode sputtering, cesium ion beam, nickel, titanium, niobium, platinum, carbon, molybdenum, rhenium, tungsten, tantalum, iron, stainless steel

ABSTRACT: The cathode sputtering coefficients of Ni, Ti, Nb, Pt, C, Mo, Re, W, Ta, Fe and stainless steel bombarded by 2 to 10 keV cesium ions were measured at temperatures from 700 to 1100°C, and the results are presented graphically. The cesium ions were produced by surface ionization of cesium vapor traversing hot porous tungsten in an ion source previously described by two of the authors (Zhur.tekh.fiz.30, 1222, 1960). The ion current was not measured, but was calculated by the $v^{2/3}$ law for space charge limited currents between infinite plane electrodes. The applicability of this law to the specific conditions of the experiment was tested by computing ion trajectories and by auxiliary experiments in which the beam was caught in a

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L 12040-65
ACCESSION NR: AP4045306

3

Faraday cup and the current measured. The formula was found to give the correct current within 10%. Strips ($1 \times 10 \times 0.05 \text{ mm}^3$) of the 11 metals were bombarded simultaneously and the sputtering coefficients were obtained by weighing the specimens before and after bombardment. The sputtering coefficients increased with increasing cesium ion energy, but reached saturation values at 7 to 9 keV. The sputtering factors also increased with increasing temperature. The increase with temperature was more marked at the higher cesium ion energies and for the more easily sputtered materials. At fixed temperature and cesium ion energy, the sputtering coefficient generally decreased with increasing heat of sublimation of the material. "In conclusion, the authors thank Academician A.I. Leypunsky of the USSR Academy of Sciences and Professors M.A. Yeremeyev and N.I. Ionov for valuable discussions." Orig.art. has: 1 formula and 5 figures.

ASSOCIATION: none

ENCL: 00

SURMITTED: 00

OTHER: 001

SUB CODE: EC,NP

NR REF Sov: 002

2/2

L 12040-65 EWT(1)/EWG(k)/EWT(m)/EPA(sp)-2/EPF(n)-2/EPA(w)-2/T/ENA/ENP(b) Pz-6/
Pab-10/Pu-4 IJP(c)/AFMDC/ASD(m)-3/ASD(m)-5/ASD(f)-2/ESD(gs)/ESD(t)
ACCESSION NR: AP4045306 S/0048/54/028/009/1488/1490

AUTHOR: Lebedev, S.Ya.; Stavisskiy, Yu.Ya.; Shut'ko, Yu.V.

TITLE: Cathode sputtering by bombardment with accelerated cesium ions Report, B
Tenth Conference on Cathode Electronics held in Kiev, 11-18 Nov 1963

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.28, no.9, 1964, 1488-1490

TOPIC TAGS: cathode sputtering, cesium ion beam, nickel, titanium, niobium, platinum, carbon, molybdenum, rhenium, tungsten, tantalum, iron, stainless steel

ABSTRACT: The cathode sputtering coefficients of Ni, Ti, Nb, Pt, C, Mo, Re, W, Ta, Fe and stainless steel bombarded by 2 to 10 keV cesium ions were measured at temperatures from 700 to 1100°C, and the results are presented graphically. The cesium ions were produced by surface ionization of cesium vapor traversing hot porous tungsten in an ion source previously described by two of the authors (Zhur.tekh.fiz.30, 1222, 1960). The ion current was not measured, but was calculated by the $V^{2/3}$ law for space charge limited currents between infinite plane electrodes. The applicability of this law to the specific conditions of the experiment was tested by computing ion trajectories and by auxiliary experiments in which the beam was caught in a

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L 12040-65
ACCESSION NR: AP4045306

3

Faraday cup and the current measured. The formula was found to give the correct current within 10%. Strips ($1 \times 10 \times 0.05 \text{ mm}^3$) of the 11 metals were bombarded simultaneously and the sputtering coefficients were obtained by weighing the specimens before and after bombardment. The sputtering coefficients increased with increasing cesium ion energy, but reached saturation values at 7 to 9 keV. The sputtering factors also increased with increasing temperature. The increase with temperature was more marked at the higher cesium ion energies and for the more easily sputtered materials. At fixed temperature and cesium ion energy, the sputtering coefficient generally decreased with increasing heat of sublimation of the material. "In conclusion, the authors thank Academician A.I. Leypunskiy of the USSR Academy of Sciences and Professors M.A. Yeremeyev and N.I. Ionov for valuable discussions." Orig.art.
has: 1 formula and 5 figures.

ASSOCIATION: none

ENCL: 00

SUBMITTED: 00

OTHER: 001

SUB CODE: EC, NP

NR REF Sov: 002

2/2

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001550310014-1

LEBFDEV, S.Ya.; STAVISKIY, Yu.Ya.; SHUT'KO, Yu.V.

Cathoda sputtering under the action of cesium ions. Zhur.
tekhn. fiz. 34 no.6;1101-1104 Je '64. (MIRA 17:9)

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001550310014-1"

S/0067/04/034/006/1101/1104

ACCESSION NR: AP4040316

AUTHOR: Lebedev, S.Ya.; Stavisskiy, Yu.Ya.; Shat'ko, Yu.V.

TITLE: Cathode sputtering by cesium ions

SOURCE: Zhurnal tehnicheskoy fiziki, v.34, no.6, 1964, 1101-1104

TOPIC TAGS: cathode sputtering, ion bombardment, cesium, nickel, titanium, niobium, platinum, carbon, molybdenum, rhodium, tungsten, tantalum, iron

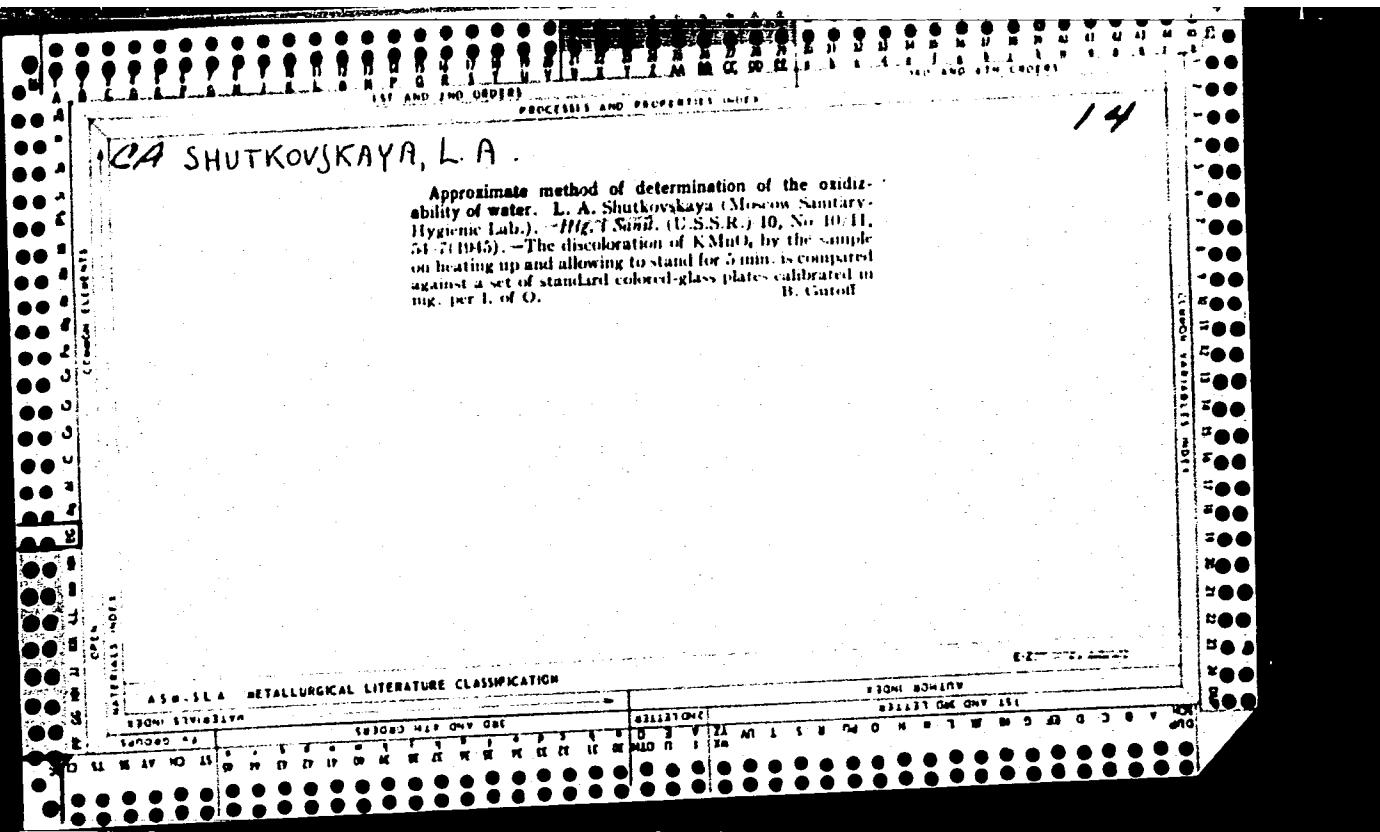
ABSTRACT: The cathode sputtering coefficients under cesium ion bombardment were measured by the weight method for Ni, Ti, Nb, Pt, C, Mo, Re, W, Ta, and Fe and the results are tabulated for cesium ion energies from 3 to 10 keV and target temperatures from 700 to 1100°C. The ions were formed by passing cesium vapor through a 20 mm diameter 1 mm thick heated disc of porous tungsten; this ion source has been described elsewhere (Yu.Ya.Stavinskii and S.Ya.Lebedev, ZTF 30, No.10, 1960). The 10 x 1 x 0.05 mm samples (all 10 at once) were fastened to the central portion of the plane cathode target, which was heated by a tungsten filament. The ion current could not be determined by simply measuring the cathode current because of secondary and thermal electron emission. The apparatus was therefore operated under such condi-

Card 1/2

PORAY-KOSHITS, B.A.; KVITKO, I.Ya.; SHUTKOV, E.A.

Synthesis of amino esters, derivatives of benzimidazole. Zhur.
prikl. khim. 37 no.6:1386-1388 Je '64. (MIRA 18:3)

I. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.



GAIKOVENKO, A., polkovnik; SHUTYOVSKIY, N., polkovnik

according to the laws of modern criminology, Novosibirsk, 1965
(USA 18:3)
S no. 143-49 Ja '65.

SHUTKOVSKIY, N.V.

[The commander as the organizer of military training]
Komandir - organizator vospitaniia voinov. Moskva. Voen-
izdat, 1963. 117 p. (MIRA 18:11)

31/10/72 (F.A.).

26-10-1/44

AUTHOR: Shutliv, F.A., Candidate of Geological and Mineralogical Sciences

TITLE: Utilization of Natural Resources of the Eastern Regions for the Benefit of the Country (Prirodnyye bogatstva vostoka - na sluzhbu rodine)

PERIODICAL: Priroda - October 1957, No 10, pp 3-10 (USSR)

ABSTRACT: The article points out the importance of scientific research in Siberia and the Far East of the USSR and gives an account of the expeditionary research work already performed during 1956 and the projects for 1957/58. The Academy of Sciences has set the goal to conduct complex exploration in three vast regions: that of the Amur river with its tributaries, Krasnoyarsk in the area of the Angara and Yenissei rivers, and the Transbaykal region, east of Lake Baykal. Small detachments of scientists had to find out what possibilities existed for building large industrial and power centers in the eastern regions, based on existing natural resources and the utilization of rivers for obtaining electric power. In connection with this research work, experts had to consider the develop-

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26-10-1/44

Utilization of Natural Resources of the Eastern Regions for the Benefit of
the Country

ment of agriculture in those regions to ensure a satisfactory food supply for the inhabitants of large industrial centers to be constructed within the next 10 to 15 years. To develop the productive forces, the USSR Academy of Sciences has established a Siberian Section of the Academy of Sciences which is to supervise branch Academies which will be opened in different parts of Siberia and the Far East. The article contains 6 photos.

ASSOCIATION: Committee for the Study of Productive Forces, the USSR Academy of Sciences (Sovet po izuchyeniyu proizvoditel'nykh sil akademii nauk SSSR) Moscow

AVAILABLE: Library of Congress

Card 2/2

SHUTLIV, Fedor Alekseevich; LEVCHENKO, S.V., otv. red.;
KRAVCHENKO, G.G., red. izd-va; BAGRAMOVA, A.A., tekhn.
red.

[Geology and metallogeny of eastern Transbaikalia] Geologiya
i metallogeniiia Vostochnogo Zabaikal'ia. Moskva, Izd-vo
Akad. nauk SSSR, 1962. 76 p. (MIRA 15:10)
(Transbaikalia—Ore deposits)

SHUTLIV, F.A., kand.geologo-mineralogicheskikh nauk

"Kursk Magnetic Anomaly." Reviewed by F.A. Shutliv. (MIRA 15:7)
Gor. zhur. no.1:78 Ja '62.

1. Laboratoriya osadochnykh poleznykh iskopayemykh poleznykh
iskopayemykh Ministerstva geologii i okhrany nedor SSSR.
(Kursk magnetic anomaly--Iron mines and mining)

MERKOV, B.P. (Moskva); GAUKH, Z.Ye. (Moskva); KOBELEV, M.V.; SYCHEV, K.I.
(Karaganda); UMAROV, M.U. (Moskva); SHUTLIV, F.A., kand.geol.-
mineral.nauk

News, events, facts. Priroda no.12:99-109 D '62. (MIRA 15:12)

1. Donetskaya geologicheskaya partiya, Novo-Troitskoye, Donetskaya
obl. (for Kobelev). 2. Tsentral'nyy sovet Vserossiyskogo obshchestva
okhrany priroda, Moskva (for Shutliv).
(Science news)

BIRYUKOVICH, P.V.; SHUTMAN, TS.M.

Bromine metabolism in manic-depressive psychoses. Fiziologichur. (Ukr.)
(MIRA 9:11)
1 no. 5:54-66 S-0 '55.

1. Institut fiziologii im. O.O.Bogomol'tsya Akademii nauk URSR,
vidsil psichiatrii i patologii vishchoi nervovoi diyal'nosti. Institut
biokhimii Akademii nauk URSR, laboratoriya biokhimii nervovoi systemy.
(PSYCHOSES, MANIC-DEPRESSIVE, metabolism in,
bromine)
(BROMINE, metabolism,
in psychoses, manic-depressive)

ARUTYUNYAN, M.; SHUTOR, Yu.

Kinetics of the evaporation from microcapillaries allowing for molecular migration in the adsorption force field. Izv. AN Turk. SSR. Ser. fiz.-tekh., khim. i geol. nauk no.4:34-37 '63. (MIRA 17:2)

1. Institut pustyn' AN Turkmeneskoy SSR.

SHUTOV, A.

Success is achieved by thorough preparations. Sov.profsoiuzy
7 no.22:32-33 N '59. (MIRA 12:12)

1. Predsedatel' postoyanno deystvuyushchego proizvodstvennogo soveshchaniya tselcha blyuming zavoda "Krasnyy Oktyabr'."
(Iron founding--Technological innovations)
(Works councils)

YEROSHINSKII, R. S., SHUTOV, A. A.

Mercury Compounds

Instability constants of complex mercury-iodide compounds. Zhur. fiz. khim. 16 no. 6, 1952

Monthly List of Russian Accessions. Library of Congress. November, 1952. Unclassified.

Morganic mercury - 6

Constants of instability of mercury-iodine complex compounds. K. B. Yatsimirskii and V. A. Bikerman (Chem. Technol. Inst., Ivanovo). *Zhur. Fiz. Khim.* 36, 842-7 (1962).—The poly. S of HgI_2 in 0.026 M, 0.090 M, 0.268 M, 0.500 M, 0.844 M, 1.038 M, 1.345 M, and 1.551 M $\text{Hg}(\text{NO}_3)_2$ at 25° is 39, 58, 278, 443, 886, 928, 1200, and 1538×10^{-4} mole/l. Except the last two, these values can be represented by $S = 0.0254 c\% + 0.0495 c\%$, in which c is the concn. of Hg^{2+} , complete dimer, being assumed. The increase of S with c cannot be explained by the ionic strength J of the soln. as S increases with c also when J remains const. (in mists. of $\text{Mg}(\text{NO}_3)_2$ and $\text{Hg}(\text{NO}_3)_2$ at $J = 6$). As S contains terms in $c\%$ and $c\%$, the increase of S is due to formation of $[\text{HgI}]^+$ and $[\text{HgI}_2]^{2+}$ ions. From the above equation $A_2K_1 = 0.0250$ and $A_2K_2 = 0.0495$; A_2 is the soly. product of HgI_2 ($= 10^{-9}$), $K_1 = 7.08 \times 10^{-16}$ is the instability const. of $[\text{HgI}]^+$, and $K_2 = 1.77 \times 10^{-11}$ the instability const. of $[\text{HgI}_2]^{2+}$. The poly. was detd. in the usual manner and also by titrating $\text{Hg}(\text{NO}_3)_2$ solns. with KI to opalescence.

J. J. Bikerman

SHUTOV, A.A.

Instability constants of iodide-cadmium and iodide-lead complexes. K. B. Yatimirskii and A. A. Shutov (Chem.-Technol. Inst., Ivanovo). *Zhur. fiz. Khim.* 27, 782-9. (1953); cf. C.A. 46, 11002d.—The calcd. instability consts. of the complex ions $(Cd_4I)^{+++}$, $(CdI)^+$, $(Pb_4I)^{+++}$, and $(PbI)^+$ at 25° were 8.16×10^{-4} , 8.41×10^{-4} , 2.10×10^{-3} , and 5.05×10^{-3} , resp., by measurement of the solv. (S) of PbI in aq. solns. of $Pb(NO_3)_2$ and $Cd(NO_3)_2$ of various concns. S depended on the cation concns. according to the empirical equations $S_1 = 0.057[Cd]^{1/2} + 0.0236[Cd]^{1/4}$ and $S_2 = 0.0032[Pb]^{1/2} + 0.00076[Pb]^{1/4}$. The calcd. relative activity coeff. (γ) of PbI in aq. solns. of Ca, Mg, and Zn nitrates are tabulated for concns. of the latter from 0.2 to 2.4M; values of γ for 1M solns. are 0.225, 0.309, and 0.319, resp., where γ for PbI in satd. aq. soln. is arbitrarily equal to unity. The solv. product of PbI , calkd. from exptl. data by the method of Kapustinskii (C.A. 38, 2870), is 1.05×10^{-3} . T. W. Jawchewski, Jr.

SHUTOV, A.A.

USSR/ Chemistry - Physical chemistry

Card 1/1 Pub. 147 - 6/26

Authors : Yatsimirskiy , K. B., and Shutov, A. A.

Title : On the thermochemistry of certain iodide complexes

Periodical : Zhur. fiz. khim. 28/1, 30-35, Jan 1954

Abstract : The change in the heat content and entropy which occurs during the formation of complex ions $[HgJ]^+$, $[CdJ]^+$ and $[PbJ]^+$ was established from the experimental data regarding the heats of blending KI solutions with $Hg(NO_3)_2$, $Cd(NO_3)_2$ and $Pb(NO_3)_2$ solutions. The specific heats of these solutions were established. The heats of formation of the iodide complexes were estimated on the basis of the heats of decomposition of solid complex $[Ag_3J](NO_3)_2$ and $[HgJ]NO_3$ salts with water and Na_2S solutions. Six references 5-USSR and 1-French (1876-1953). Tables.

Institution : The Chemical Technological Institute, Ivanovo

Submitted : February 16, 1953

KUNIN, T.I.; SHUTOV, A.A.; PANKRATOVA, L.I.

Specific heats of aqueous solutions of sulfuric acid and nitric acid mixtures. Zhur. prikl. khim. 34 no.2:451-454 F '61.
(MIRA 14:2)

(Sulfuric acid) (Nitric acid)
 (Heat capacity)

SAVIN, V.N.; SHUTOV, A.A.

Effect of gamma rays on tillering and growth of side shoots
of some field crops. Radiobiologija 5 no.5:770-772 '65.
(MIRA 18:11)

1. Agrofizicheskiy institut, Leningrad.

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001550310014-1

Secretary of Defense, Washington, D.C., October, 1947, by
the Director of the National Defense Commission, General
George C. Marshall, Chairman.

1. After the termination of hostilities in Europe, Germany,
and the Central European Institute.

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001550310014-1"

SHEFER, D.G., SHUTOV, A.A.

Role of cerebellar symptoms in the topical diagnosis of tumors
of the posterior cranial fossa and their pathogenesis. Zhur.
nevr. i psikh. 64 no.8:1136-1139 '64. (MIRA 17:12)

1. Klinika nervnykh bolezney i neyrokhirurgii (zaveduyushchiy -
prof. D.G. Shefer) Sverdlovskogo meditsinskogo Instituta.

SHUTOV, A.A., aspirant (Sverdlovsk)

Significance of cerebellar symptoms in the diagnosis of tumors
of the posterior cranial fossa. Vop. neirokhir. 27 no.4:41-45
Jl.-Ag'63 (MIRA 17:2)

1. Klinika nervnykh bolezney i neyrokhirurgii (zav. - prof.
D.G. Shefer) meditsinskogo instituta.

ЛУТЯК, А. И., ВАСИЛЬЕВ, Е. А., ДУДЧЕНКО, В. О., СЕРГЕЙ, И. Н. (УЗР)

"Isolation of Glycoproteins from the Seeds of Certain Leguminous Plants and Determination of their N-Terminal Amino Acids."

Report presented at the 5th Int'l. Biochemistry Congress,
Moscow, 10-16 Aug 1961.

SHUTOV, A.D.

Simple fraction collector with a time indicator. Trudy po khim.
prirod. soed. no.5:45-47 '62. (MIRA 16:11)

1. Laboratoriya khimii belka Kishinevskogo gosudarstvennogo universiteta.

VAYNTRAUB, I.A.; SHUTOV, A.D.

Globulins in the seeds of vetchling. Trudy po khim.prirod. soed.
no.5:49-52 '62. (MIRA 16:11)

1. Laboratoriya khimii belka Kishinevskogo gosudarstvennogo universiteta.

VAYNTRAUB, I.A.; SHUTOV, A.D.; KLIMENKO, V.G.

Vetch seed globuline. Biokhimiia 27 no.2:349-358 Mr-Ap '62.
(MIRA 15:8)

1. Laboratory of Protein Chemistry, State University, Kishinev.
(GLOBULIN) (VETCH)

SHUTOV, A.D.; VAYNTRAUB, I.

Use of the zone precipitation method for the separation of leguminous seed globulins. Ukr. biokhim. zhur. 37 no.2:177-181 '65.
(MIRA 18:6)

1. Laboratoriya khimii belka Kishinevskogo gosudarstvennogo universiteta.

VAYNTRAUB, I.A.; SHUTOV, A.D.

Chromatography of vetch seed proteins on DEAE-cellulose.
Biokhimia 29 no.5:863-868 Jl-Ag '64. (MIRA 18:11)

1. Laboratoriya khimii belka Kishinevskogo gosudarstvennogo
universiteta.

KULAGIN, Varnov Petrovich; SHUTOV, A.F., red.; KONARDOVA, T.F., red.
izd-va; PARAKHINA, N.L., tekhn. red.

[Results of experimental work at the Siberian Zonal Tree-Tapping Station] Rezul'taty opytnykh rabot Sibirskoi zonal'noi stantsii po podsochke lesa. Moskva, Goslesbumizdat, 1960. 30 p.
(MIRA 14:9)

(Siberia—Tree tapping)

SHUTOV, A.F.

For further technical progress in the tree-tapping industry.
Gidroliz.i lesokhim.prom. 13 no.3:1-3 '60.
(MIRA 13:7)

1. Gosudarstvennyy nauchno-tehnicheskiy komitet Soveta
ministrów RSFSR.
(Tree tapping)

GORDON, L.V.; UVAROV, I.P.; KATUNIN, V.Kh.; SHUTOV, A.F.; KAMINER, B.B.;
FOMENKO, L.A.

Distillation and coking of wood tar with a solid heat
carrier. Gidroliz.i lesokhim.prom. 13 no.3:3-4 '60.
(MIRA 13:7)

1. TSentral'nyy nauchno-issledovatel'skiy lesokhimicheskiy
institut (for Katunin). 2. Gosudarstvennyy nauchno-tekhnicheskiy
komitet Soveta ministrov RSFSR (for Shutov). 3. Vsesoyuznyy
nauchno-issledovatel'skiy institut po pererabotke nefti i gaza
(for Fomenko).

(Wood tar) (Distillation)

DUBIN, Zinoviy Yudelevich; SHUTOV, A.F., red.; KHIVRICH, Ye.D., red. izd-va;
LOBANKOVA, R.Ye., tekhn. red.

[Manual of turpentine and rosin production] Posobie po smolo-
skipidarnomu proizvodstvu. Moskva, Goslesbumizdat, 1961. 61 p.
(MIRA 14:7)

(Turpentine industry)

SHUTOV, A.F.

Speeding up the construction of experimental sections and machines. Gidroliz. I lesokhim. prom. 17 no.481-2 '64
(MIRA 1737)

1. Gospodarskomy komitet Soveta Ministrów RSFSR po koordinatsii nauchno-tekhnicheskoy raboty.

VYSOTSKIY, A.A.; KAMELIN, V.P.; SHUTOV, A.F., nauchn. red.;
GANSHINA, L.F., red.

[Chemical action during tapping and turpentining] Khi-
micheskoe vozdeistvie pri podsochke i osmolopodsochke.
Moskva; TSentr. nauchno-issl. in-t informatsii i tekhniko-
ekon. issledovani po lesnoi, tselliulczno-bumazhnoi, de-
revoobrabatyvaiushchei promyshl., i lesnomu khoz., 1964.
(MIRA 17:12)

19 p.

1. Kirovskiy nauchno-issledovatel'skiy institut lesnoy pro-
myshlennosti (for Vysotskiy). 2. Trest "Kirkhimleszag" (for
Kamelin).

ARUTYUNOV, S.M.; SHENKER, S.I.; SHUTOV, A.G.

Pay more attention to the mechanization of auxiliary
operations. TSement 29 no.4:10-11 Jl-Ag '63.
(MIRA 16:11)

1. Slantsevskiy tsementnyy zavod.

SHUTOV, A. I., ZAGALOVA, P. I., IONESUAN, A. S., and PITENKO, N. F.

"Condition of the Upper Respiratory Tract in Workers of the Electrolytic Shop of 'Elektrotsink' Plant," by Docent N. F. Pitenco and Clinical Physicians A. I. Shutov, P. I. Zagalova, and A. S. Ionesuan, Ear, Throat, and Nose Clinic, Severo-Otinskiy Medical Institute, Gigiyena i Sanitariya, Moscow, Vol 21, No 12, Dec 56, pp 48-49

The authors report the results of medical examinations of a number of workers employed at the electrolytic shop of "Elektrotsink" plant who complained of diseases of the upper respiratory passages. The examinations revealed serious affections of the passages: nosebleeds, ulcerations of the mucous membrane, perforations of the nasal diaphragm, and others, all undoubtedly caused by pungent substances which contaminated the atmosphere in the shop. The shop, it was found, had a large number of electrolytic baths filled with a neutral solution of neutral zinc sulfate. In the course of the electrolytic process, gas bubbles containing toxic substances are formed and evaporate forming a pungent fog which contaminates the atmosphere in the shop. In addition, it is thought that fluorite compounds which are present in the electrolytes in some quantities play their part in causing the affections.

On the basis of the examinations, a number of measures with a view toward improving hygienic-sanitary conditions at the shop and protecting the workers' health are recommended. Among them are (1) the exclusion from employment in the shop of persons who may be susceptible to diseases of the upper respiratory tract, (2) proper ventilation, (3) the installation of facilities for drawing off the gases directly from the baths, (4) organized periodic washing of the mouth during work hours, and the application of vaseline to nasal mucous membrane before work begins, and (5) organized systematic inspection of the air in the shop.

Sum 1258

SHUTOV, A.I.

Plastic surgery on the tympanum. Zhur. ush., nos. i gorl. bol. 20
no.1:53-55 Ja-F '60. (MIRA 14:5)

1. Iz kliniki bolezney ukha, gorla i nosa (zav. - dotsent N.F.Pitenko)
Severo-Osetinskogo meditsinskogo instituta.
(EAR--SURGERY)

SHUTOV, A.I.; OLESHKO, G.I.; ROMANES, G.U., inzh., retsenzent; PERSHIN, B.F., inzh., retsenzent; TSARENKO, A.P., inzh., red.; USENKO, L.A., tekhn. red.

[Improving the technical operation of the Osnova Railroad Station]
Sovershenstvovanie tekhnologii raboty stantsii Osnova. Moskva,
Vses. izdatel'sko-poligr. ob"edinenie M-va putei soobshchenia,
1961. 34 p.
(MIRA 14:7)
(Osnova (Kharkov Province)--Railroads--Stations)

SHUTOV, A.I., Geroy Sotsialisticheskogo Truda; OLESHKO, G.I.,
kand.tekhn.nauk

Efforts of the Osnova Station staff to lower operation costs.
Zhel.dor.transp. 43 no.8:58-62 Ag '61. (MIRA 14:8)

1. Nachal'nik stantsii Osnova (for Shutov).
(Railroads--Cost of operation)

GADZAOV, V.K.; SHUTOV, A.I.

Intratracheal anesthesia in otorhinolaryngology. Zhur. ush. nos. i
gorl. bol. 21 no.4:70-71 Jl-Ag '61. (MIRA 15:1)

1. Iz kafedry bolezney ukha, gorla i nosa (zav. - doktor med.nauk
N.F.Pitenko) Severo-Osetinskogo meditsinskogo instituta.
(INTRATRACHEAL ANESTHESIA) (OTOLARYNGOLOGY)

ACC NR: AT6035083

(N)

SOURCE CODE: UR/3095/66/035/000/0003/0012

AUTHORS: Kolesnikov, A. G.; Isayev, I. L.; Isayeva, L. S.; Naumonko, M. F.; Chigrakov, K. I.; Shutov, A. P.

ORG: none

TITLE: The macrostructure of the temperature field on the ocean surface

SOURCE: AN UkrSSR. Morskoy gidrofizicheskiy institut. Trudy, v. 35, 1966.
Gidrofizicheskiye i hidrokhimicheskiye issledovaniya tropicheskoy zony Atlantika
(Hydrophysical and hydrochemical research in the tropical zone of the Atlantic), 3-12

TOPIC TAGS: temperature distribution, ocean dynamics, research ship

ABSTRACT: The purpose of this paper is to investigate the temperature field of the ocean surface--the interface between hydrosphere and atmosphere over the ocean. This temperature field is a function of the intensity of vertical heat exchange in both media, the transfer of heat by ocean currents and winds, and also of "boundary" turbulence associated with the specific characteristics of the interface. Data for this study were obtained by making continuous records of the temperature of the surface water during passage of the Russian research ship Kikhail Lomonosov. A thermistor device was used, and the record was made by means of a self-recording EPP-09 potentiometer. Inertial lag in the record amounted to 0.3 sec. Analysis of curves of spectral density (drawn for three oceanic traverses) shows that the

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ACC NR: AT6035083

dependence of the spectral density on wave number follows the "5/3 law" rather well, both for the open ocean and for near-shore zones, but the relation is not smoothly rectilinear. The spectra display a series of maximums, reflecting secondary sources acting at fixed intervals of wave numbers. These are related to dynamics of the water as a result of vertical movements and thermally induced changes (from invading currents, rise of water from depth, cloudiness that causes irregular heating by solar radiation, interaction of atmospheric fronts, etc). The actual spectral density of temperature fluctuations for the open ocean is approximately one order less than for the near-shore parts of the ocean. In the middle-scale region (of wave numbers), a minimum of spectral density occurs, characteristic of a number of meteorological elements such as heat flux, air temperature, wind velocity, and pressure. Orig. art. has: 3 figures and 4 formulas.

SUB CCDE: 08/

SUBM DATE: none/

ORIG REF: 004/

OTH REF: 001

Card 2/2

ACC NR: AT6023559

(N)

SOURCE CODE: UR/3095/66/036/000/0103/0107

AUTHOR: Isayev, I. L.; Naumenko, M. F.; Chigrakov, K. I.; Shutov, A. P.

ORG: None

TITLE: Measurement of ocean surface temperature by a ship underway

SOURCE: AN UkrSSR. Morakoy gidrofizicheskiy institut. Trudy, v. 36, 1966. Metody i pribory dlya issledovaniya fizicheskikh protsessov v okeane (Methods and instruments for studying physical processes in the ocean), 103-107

TOPIC TAGS: ~~oceanographic equipment~~, oceanographic instrument, oceanographic ship, oceanography, thermistor, thermal analysis, thermometry, temperature instrument, temperature measurement, temperature sensitive element, sea water

ABSTRACT: An improved version of a low-inertial apparatus, and methods of measuring ocean surface temperatures under natural conditions, have been worked out in the Maritime Hydrophysical Institute of the Academy of Sciences of the Ukrainian SSR from measurements made regularly aboard Mikhail Lomonosov since 1959. The Karmanov semiconductor thermoresistance systems are used for temperature measurements. However, Soviet-produced glass thermistors (the MT-54, for example) are unreliable at sea, so a special well for the thermal unit was devised. The new apparatus is shown in cross section and a brief description of its structure and characteristics is given. It is accurate to within 0.01°C. The direct current bridge used is described

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ACC NR: AT6023559

and its wiring diagram presented. The use made of the instrument aboard Mikhail Lomonosov is described, and the practical work done at sea has proven that the apparatus and the methods used are reliable and sufficiently sensitive for use in researching the temperature field of the ocean surface, and are so recommended. Orig. art. has: 2 figures.

SUB CODE: 08 /SUBM DATE: None/ORIG REF: 004

Card 2/2

UNAROV, S.E., MAGAZANIK, S.S.; OVRCHENKOVA, A.N.; SHUSTOV, A.V.;
TOLSTIY, Ye.I.; KAMENEVA, A.L.; KURZAKOVA, A.S.; UNTSKAYA, P.S.

Immunological prophylaxis of tick-borne encephalitis. Vop.
virus. 10 no.43462-467 Jl-Ag '65. (MIRA 18:8)

I. Moskovskiy nauchno-issledovatel'skiy institut virusnykh
preparatov Ministerstva zdravookhraneniya SSSR i Sverdlovskaya
oblastnaya sanitarno-epidemiologicheskaya stantsiya.

SHAROV, V. A., SHUTOV, V. V.

MATERIALS for the study of immunological changes in patients
vaccinated and re-vaccinated with tissue-encephalitis vaccine.
Vop. virus. 9 no. 5/604-608 U.S.S.R. '64. (MIRA 18:6)

1. Minskayu nauchnoissledovatel'skiy institut virusnykh
preparatov Ministrstva zdravookhraneniya SSSR, Moskva.

L 25989-66 EWT(1)/T JK
ACC NR: AP6016100 (N)

SOURCE CODE: UR/0402/65/000/006/0674/0677

28
27
3

AUTHORS: Unanov, S.S.; Neustroyev, V.D.; Levchenko, Ye.N.; Shutov, A.V.

ORG: Moscow Scientific Research Institute of Virus Preparations (Moskovskiy nauchnoissledovatel'skiy institut virusnykh preparatov)

TITLE: Isolation of strains of tick-borne encephalitis virus from Ixodes persulcatus ticks collected during the 1964 epidemic season

SOURCE: Voprosy virusologii, no. 6, 1965, 674-677

TOPIC TAGS: encephalitis, virus, mouse, epidemiology

ABSTRACT: The article presents the results of an investigation of the virus-carrying capacity of Ix. persulcatus ticks collected in certain endemic regions of Sverdlovskaya Oblast during the 1964 epidemic season, as determined by preparing a centrifuged suspension of the ticks and infecting with it mice weighting 7-8 g and observing the animals for 21 days. Altogether 59 strains of the tick-borne encephalitis virus had been isolated by the complement fixation test. The nonuniform distribution of the virus-carrying capacity of ticks over various periods is notable: the ticks collected in May carried 1/2

ACC NR: AP6021598

(1)

SOURCE CODE: UR/0402/66/000/003/0376/0376

AUTHOR: Unanov, S. S.; Levchenko, Ye. N.; Shutov, A. V.

ORG: Moscow Viral Preparations Research Institute, Ministry of Health SSSR
(Moskovskiy nauchno-issledovatel'skiy institut virusnykh preparatov Ministerstva zdravookhraneniya SSSR)

TITLE: Properties of tick-borne encephalitis virus strains isolated from patients and from corpses of suspected encephalitis cases

SOURCE: Voprosy virusologii, no. 3, 1966, 376

TOPIC TAGS: human disease, disease diagnosis, tick borne encephalitis, virology, virus, encephalitis ~~virus~~, viral properties, ANIMAL PARASITE

ABSTRACT:

Fifteen strains isolated from blood and body fluids of patients and corpses infected white mice with tick-borne encephalitis. Laboratory tests identified the viruses as encephalitis viruses. Most of them were highly virulent for white mice regardless of route of infection. [W.A. 50; CBE No. 10]

SUB CODE: 06/ SUBM DATE: none/

Card 1/1

SHUTOV, B.D.

Significance of fragmental feldspars for the paleogeography
based on the study of terrigenous components. Vop. min. osad.
obr. 6:245-265 '61. (MIRA 15:6)
(Feldspar) (Paleogeography)

Shutov, S. A., Mamedov, M. I. and Kuzina, T. F. "On the variability of the ascorbic acid content in the leaves of some evergreen trees under the vegetation conditions of the city of Baku", Trudy Azerbayzh. gos. un-ta im. Kirova, Biol. seriya, Vol. III, Issue 3, 1941, p. 51-61, - Bibliog: 9 items.

SC: U-3042. 11 March 53, (Letopis 'nykh Statey, No. 10, 1942).

Journal, 1961, p. 16 B - U.S.A.

Investigating the ability and capacity for compilation of
tomato seeds from seeds subjected to irradiation. Isv.Yield.fil.
AN 1961 no.4134-101.

(MIRB J7:JC)

SHUTOV, D.A.

USSR/Cultivated Plants - Technical, Oil and Sugar Plants

M-4

Abs Jour : Ref Zhur - Biol., No 3, 1958, 10879

Author : Shutov, D.A., Belyayev, N.V.

Inst : Moldavian Branch of the Academy of Sciences USSR

Title : Freezing Cotton Seed Before Sowing.

Orig Pub : Izv. Moldavsk. fil. AN SSSR, 1956, No 2, 57-62

Abstract : In this experiment cotton 611 was grown in flower pots. Swollen cotton seeds react positively both to prolonged action of cold (10 days at 0°) and to short-term exposure (13 hours at -2°). Chilling the seeds does not accelerate development: budding [butonizatsiya] flowering, and opening of the pods. The plant's growing energy is heightened, as are its production of fruit and the total raw cotton yield. However the first pickings from the experimental plants were somewhat lower in yield than the

Card 1/2

5

SHUTOV, E. G. Cand Phys-Math Sci -- (diss) "Potential properties of semigroups." Len, 1958. 8 pp (Len State Ped Inst im A. I. Gertsen), 100 copies (KL, 14-58, 109)

-12-

81395
S/020/60/132/06/15/068
C111/C222

16

AUTHOR: Shutov, E.G.

TITLE: Defining Relations of Finite Semigroups of Partial Transformations

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 132, No. 6, pp. 1280-1282

TEXT: Let Ω be the set of numbers $1, 2, \dots, n$, $n \geq 4$; let Δ_1 and Δ_2 be subsets of Ω . The mapping of Δ_1 onto Δ_2 is called a partial transformation of Ω : $a_i = k$, $i \in \Delta_1$, $k \in \Delta_2$, a - partial transformation.

Let W_n be the semigroup of all partial transformations of Ω and V_n be the semigroup of all one-to-one partial transformations of Ω . Let H_n be the semigroup of all transformations of the set Ω and S_n be the group of all one-to-one transformations of the set Ω . Let

$$a = \begin{pmatrix} 1 & 2 & 3 & \dots & n \\ 1 & 1 & 3 & \dots & n \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 2 & 3 & \dots & n \\ 2 & 3 & \dots & n \end{pmatrix}$$

Card 1/3

X

81395

Defining Relations of Finite Semigroups
of Partial Transformations

S/020/60/132/06/15/068
C111/C222

$$c_i = \begin{pmatrix} 1 & 2 & \dots & i-1 & i & i+1 & \dots & n \\ i & 2 & \dots & i-1 & 1 & i+1 & \dots & n \end{pmatrix} \quad (2 \leq i \leq n)$$

Let M_1 be the set of all c_2, c_3, \dots, c_n ; let M_2 be the set of all c_2, c_3, \dots, c_n, a ; let M_3 be the set of all $c_2, c_3, \dots, c_n, a_1$ and let M_4 be the set of all $c_2, c_3, \dots, c_n, a, a_1$.

Let $c_2^2 = 1$, $c_i a_1 c_i = a_i$.

Theorem 1 : The system of relations

- 1. Defining relations of the group S_n with respect to M_1 (compare (Ref. 2))
- 2. $a_1 l = l a_1 = a_1$, $a_1 a_2 = a_2 a_1$, $a_1^2 = a_1$
- 3. $a_2 c_i = c_i a_2$, $a_i c_2 = c_2 a_i$ ($3 \leq i \leq n$)
- 4. $c_2 a_1 a_2 = a_1 a_2$

Card 2/3

88212

S/020/60/134/002/037/041XX

C 111/ C 333

16.2000

AUTHOR: Shutov, E. G.

TITLE: Semigroups of Almost Identical Transformations

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 134, No. 2,
pp. 292-295

TEXT: The author uses the notations from (Ref.1).

The author determines all stable equivalences of the semigroup H_{Ω} of all almost identical transformations of an infinite set Ω . He uses these results in order to determine all endomorphisms of this semigroup which are different from isomorphisms. Then the author investigates some properties of the semigroup of all almost identical partial transformations of a set Ω . He gives an abstract characteristic of this semigroup, and describes all the ideals, normal subsemigroups and automorphisms of this semigroup.

For the case of finite sets Ω , all the results are already contained in (Ref.1-3); in the case of infinite sets Ω , some partial results already exist in (Ref.3,4). Altogether the author gives 7 theorems and a number of definitions and conclusions. He uses results of

Card 1/2

88212

S/020/60/134/002/037/041XX
C 111/ C 333

Semigroups of Almost Identical Transformations

(Ref.1,3).

A. J. Mal'tsev, N. N. Vorob'yev and L. M. Glaskin are mentioned
in the paper.

There are 4 Soviet references.

[Abstracter's note: (Ref.1) is a paper of A. J. Mal'tsev in
Matematicheskiy sbornik, 1952, Vol. 31, No. 1, 136].

ASSOCIATION: Udmurtskiy gosudarstvennyy pedagogicheskiy institut
imeni Desyatiletija UAO (Udmurtian State Pedagogical
Institute imeni Desyatiletija UAO)

PRESENTED: May 3, 1960, by A. N. Kolmogorov, Academician

SUBMITTED: April 24, 1960

Card 2/2

SHUTOV, E.G.

Homomorphisms of the semigroups of all partial transformations. Izv. vys. ucheb. zav.; mat. no.3:177-184 '61.
(MIRA 14:7)

1. Izhevskiy pedagogicheskiy institut.
(Groups, Theory of)
(Transformations (Mathematics))

SHUTOV, E.G.

Semigroups of one-to-one transformations. Dokl. Ak SSSR 140
no.5:1026-1028 O '61. (MIRA 15:2)

1. Udmurtskiy gosudarstvennyy pedagogicheskiy institut im.
Desyatiletija Udmurtskoy Avtonomnoy Oblasti.
(Groups, Theory of)
(Transformations(Mathematics))

SHUTOV, E.G. (Izhevsk)

Semigroups with ideal susemigroups. Mat. sbor. 57 no.2:179-186
Je '62. (MIRA 15:6)

(Groups, Theory of)

SHUTOV, E.G.

A semigroup of almost all identical partial transformations.
Izv.vys.ucheb.zav.; mat. no.6:155-161 '62. (MIRA 15:12)

1. Udmurtskiy gosudarstvennyy pedagogicheskiy institut.
(Groups, Theory of) (Topology)

SHUTOV, E.G. (Izhevsk)

Homomorphisms of a semigroup of all almost identical transformations.
Izv. vys. ucheb. zav.; mat. no.2:176-180 '63. (MIRA 16:3)
(Groups, Theory of) (Transformations (Mathematics))

SHUTOV, E.G.

Homomorphisms of certain semigroups of continuous monotone functions.
Sib. mat. zhur. 4 no.4:944-950 Jl-Ag '63. (MIRA 16:9)

SHUTOV, E.G.

A semigroup of one-to-one transformations. Usp. mat. nauk 18
no.3:231-235 My-Je '63. (MIRA 16:10)

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001550310014-1

SHUL'YEV, V.V. (Uzhevsk)

Embedding of semigroups into simple and complete semigroups.
Mat. sov. 62 no.4:496 511 D '63. (MIR 17:4)

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001550310014-1"

BRUTER, M.G. (1930-)

Stability in semigroups and rings. Izv.
Akad. Nauk. SSSR, mat. issled., 1961, v. 16,
pp. 169-176. (MIEI 17:3)

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001550310014-1

RECORDED

Transcription in longhand. Rep. recd. bank 16 no. A215-328 4c
(MRA 17:10)

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001550310014-1"

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001550310014-1

SHUTOV, F.G. (Izhevsk)

Some embeddings of semigroups with reduction. Mat. sber. 67 no.2:167-
180 Je '65. (MIRA 18:3)

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001550310014-1"

SHUTOV, F.G. (Izhevsk)

Potential reducibility of elements in some semigroups of
transformations. Mat. sbor. 68 no.1:3-16 S '65.
(MIRA 18:9)

GRYZLOV, V.F., kand. sel'khoz. nauk; BULGAKOV, T.F.; KUTENNIKOV,
F.V., kand. tekhn. nauk; SHUTOV, G.A., red.; MONOVA, Ye.S.,
red.

[Oilseed and opium poppy] Mak maslichnyi i opiinyyi. Mo-
skva, Sel'khozizdat, 1963. 141 p. (MIRA 18:2)

1. Starshiy agronom Gosudarstvennogo tresta po vyrashchivaniyu
i zagotovke lekarstvenno-rastitel'nogo srediya (fer Bulgakov).

Country : USSR
CATEGORY :

M-6

ADS. JOUR. : Rzbiol., No. 7, 1958, No. 2711

AUTHOR : Shatun, G. K.

INST. :

TITLE : Methods of Accelerating Ripening of Lupines

ORIG. PUB. : Minsk, gospudarstvo Belorusi, 1957, No. 7,
12-15

ABSTRACT : The Belorussian Scientific Research Institute of Agriculture carried out in 1954-1956, at the experimental station of the Belorussian Academy of Sciences and on agricultural farms, the spraying of lupines grown for seed with different herbicidal plants, to effect defoliation and accelerate ripening of the seeds. Spraying with an solution of sodium thiocyanate at a rate of 300-1000 liters per hectare did not increase yield of seeds, or their botanical quality, but accelerated seed maturation and made it possible to harvest lupines by plowing.

V. S. Chernikov.

SHUTOV, G.M.; ZBARSKIY, V.L.; ZHILIN, V.F.; ORLOVA, Ye.Yu.

Nucleophilic substitution of halogen for a nitro group in aromatic nitro compounds. Part 1: Interaction of tetranitro derivatives of benzene with halogen acids and phosphoryl chloride. Zhur. ob. khim. 33 no.10:3210-3211 O '63.

(MIRA 16:11)

1. Moskovskiy khimiko-tehnologicheskiy institut imeni D.I. Mendeleyeva.

L 43892-65 EPF(c)/EWP(j)/EWA(c)/EWT(m) PC-4/Pr-4 RPI RM/JW

ACCESSION NR: AP5010854

UE/0286/65/000/007/0020/0020

27

B

AUTHORS: Shutov, G. M.; Zhilin, V. F.; Zbarskiy, V. L.; Orlova, Ye. Yu.

TITLE: A method for obtaining 2, 4, 6 trinitro-m-phenylenediamine. Class 12,
No. 169504 ✓

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 7, 1965, 20

TOPIC TAGS: organic material, chemical reaction, styphnic acid, chlorination, pyridine, phosphorus compound

ABSTRACT: This Author Certificate presents a method for obtaining 2, 4, 6-trinitro-m-phenylenediamine by chlorinating styphnic acid in the presence of pyridine, and then by aminating the obtained 2, 4, 6-trinitro-m-dichlorbenzene in the boiling methanol. To increase the yield of the product and to shorten the time of the process, phosphorus chloride is used as the chlorinating agent, and the reaction is conducted at about 100C.

ASSOCIATION: none

SUBMITTED: 12Sep62
Card 1/2

ENCL: 00

SUB CODE: 00

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001550310014-1

L 43892-65

ACCESSION NR: AP5010854

NO REF Sov: 000

OTHER: 000

Card 2/2 CC

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001550310014-1"

I, 53737-65 EPP(c)/EWP(j)/EWT(m)/EWA(c) PC-4/Pr-4 RPL JW/RM
ACCESSION NR: AP5015561 UR/0286/65/000/008/0116/0116
662.22 31

AUTHOR: Shutov, G. M.; Maksimov, Yu. Ya.; Zbarskiy, V. L.; Zhilin, V. F.; Orlova, Ye. Yu.

TITLE: Preparative method for octogen.¹ Class 78, No. 170360 ¹⁵

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 8, 1965, 116

TOPIC TAGS: octogen, preparation, explosive

ABSTRACT: An Author Certificate has been issued for a preparative method for octogen involving the treatment of crystalline hexamethylenetetramine with concentrated nitric acid, with subsequent recrystallization of the reaction product from the solvent. To increase the thermal stability of the end product, the solvent used is dimethylformamide. [SM]

ASSOCIATION: none

SUBMITTED: 14Apr64
NO REF Sov: 000

ENCL: 00
OTHER: 000

SUB CODE: WA, 0c
ATD PRESS: 4019

Cord 1/1

SHUTOV, G.M.; ZBARSKIY, V.L.; ZHILIN, V.F.; ORLOVA, Ye.Yu.

Nucleophilic substitution by halogen in aromatic nitro compounds.
Part 2: Catalytic effect of pyridine in reactions of polynitro
derivatives of benzene and phenol with phosphorus oxychloride.
Zhur. ob. khim. 35 no.8:1358-1361 Ag '65. (MIRA 18:8)

1. Moskovskiy khimiko-tehnologicheskiy institut imeni D.I.
Mendeleyeva.

ZBARSKIY, V.L.; SHUTOV, G.M.; ZHILIN, V.F.; ORLOVA, Ye.Yu.

Some particular features of nitration in the diphenylamine series. Zhur. org. khim. 1 no.7:1237-1239 Jl '65.

(MIRA 18:11)

1. Moskovskiy khimiko-tehnologicheskiy institut imeni D.I. Mendeleyeva.

L 29294-66 EWP(j)/EWT(m)/T RM/NW/JW/JWD

ACC NR: AP6019318

SOURCE CODE: UR/0079/65/035/008/1358/1361

AUTHOR: Shutov, G. M.; Zbarskiy, V. L.; Zhilin, V. F.; Orlova, Ye. Yu.

47
48

B

ORG: Moscow Chemicotechnological Institute im. D. I. Mendeleyev (Moskovskiy khimiko-tehnologicheskiy institut)

TITLE: Nucleophilic substitution of halogen in aromatic nitro compounds. II. Catalytic action of pyridine in reactions of polynitro derivatives of benzene and phenol with phosphorus oxychloride

SOURCE: Zhurnal obshchey khimii, v. 35, no. 8, 1965, 1358-1361

TOPIC TAGS: aromatic nitro compound, catalysis, pyridine, chemical reaction

ABSTRACT: The substitution of NO_2 groups with Cl in 1,2,4,6-tetrinitrobenzene, 2,3,4,6-tetrinitroaniline, 2,3,4,6-tetrinitrophenol, 1,2,4-trinitrobenzene, 3,4,5-trinitrotoluene, 3,4,5-trinitrochlorobenzene, 3,4-dinitrochlorobenzene, o-dinitrobenzene, and p-dinitrobenzene was studied. The dinitro derivatives of benzene did not react either with concentrated HCl or with POCl_3 in the presence of pyridine. The trinitro derivatives reacted with POCl_3 under substitution of the activated NO_2 group, but only in the presence of pyridine. Tetrinitrobenzene and tetrinitroaniline

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UDC: 547.546;+547.564.3

L 29294-66

ACC NR: AP6019318

did not react with POCl_3 in the absence of pyridine, but reacted with it when pyridine had been added, yielding chloro derivatives (2,4,6-trinitro-3-chloroaniline in the case of tetrinitroaniline). Tetrinitrophenol reacted with POCl_3 in the absence of pyridine, yielding 2,4,6-trinitro-3-chlorophenol, but the reaction took place only when the mixture was diluted with water. Apparently, tetrinitrophenol reacted with HCl formed by hydrolysis of POCl_3 . Addition of pyridine to tetrinitro derivatives required caution, because pyridine was ignited by them. The reaction of styphnic acid (1,3-dihydroxy-2,4,6-benzene) with POCl_3 in the presence of pyridine hydrochloride resulted in the formation of 2,4,6-trinitro-3-chlorophenol. This indicated that electrophilic substitution must be the initial stage of the reaction of nitrophenols with POCl_3 (apparently substitution of H in 3-OH with a POCl_2 group took place.) A reaction of monopyridine styphnate with POCl_3 in the presence of water did not take place, while in the absence of water 1,3-dichloro-2,4,6-trinitrobenzene formed. Addition of pyridine to a suspension of styphnic acid in POCl_3 resulted in ignition of the mixture; for this reason monopyridine styphnate was prepared initially and the salt brought into reaction with POCl_3 . Orig. art. has: 2 figures and 2 formulas. [JPRS]

SUB CODE: 07 / SUEM DATE: 04Jul64 / ORIG REF: 003 / OTH REF: 002
Card 2/2 CC

L 13028-66 EWT(1)/EWT(m)/ETG(F)/EFF(n)-2/ENG(m)/ENP(j)/T/ETG(m) IJP(c)/RPL/

ACC NR: AP5028586 ~~WV/CG/RM~~ SOURCE CODE: UR/0076/65/039/011/2817/2819 *28*AUTHOR: Shutov, G. M. *56*ORG: Moscow Institute of Chemical Technology im. D. I. Mendeleev *B*
(Moskovskiy khimiko-tehnologicheskiy institut)

TITLE: Certain characteristics of monomolecular reactions in the condensed phase

SOURCE: Zhurnal fizicheskoy khimii, v. 39, no. 11, 1965, 2817-2819

TOPIC TAGS: reaction kinetics, condensed phase, thermal decomposition, molecular interaction

ABSTRACT: The reasons underlying the significantly lower rate of thermal decomposition of substances in the solid state than in the liquid state are studied. The effects of intermolecular interaction of homolytic decomposition in the condensed phase are presented. In the case of monomolecular decomposition in the condensed phase the formation of the transitional state is accompanied by the compression of the surrounding medium by the magnitude of the free state of activation. The increase of the free energy is inversely proportional to the compressibility coefficient, which is several times greater for liquids than for

UDC: 541.124/.128

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L 13028-66

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solids. This explains the homogeneous nature of the decomposition of liquids and the heterogeneous decomposition of solids. It is believed that the energy of the activated complex during monomolecular decomposition in the solid phase and on its surface must include the energy of interaction with the surrounding molecules. It is shown that the kinetic parameters of the decomposition of solids may depend on such macrophysical characteristics as the thermal expansion coefficient and compressibility.

SUB CODE: 20,07/ SUBM DATE: 01Nov64/ ORIG REF: 005/ OTH REF: 003

Card 2/2

L 30402-66 EWP(j)/EWT(m) RM/DS/NW/JW/JWD/WE

ACC NR: AP6008099

SOURCE CODE: UR/0076/66/040/002/0504/0506

69
68
B

AUTHOR: Zhilin, V. F.; Zbarskiy, V. L.; Shutov, G. M.; Orlova, Ye. Yu.

ORG: Moscow Chemical Engineering Institute im. D. I. Mendeleev (Moskovskiy khimiko-tehnologicheskiy institut)

TITLE: Methods of studying the kinetics of fast exothermic reactions

SOURCE: Zhurnal fizicheskii khimii, v. 40, no. 2, 1966, 504-506

TOPIC TAGS: chemical reaction kinetics, heat of reaction, exothermic reaction, tertiary amine, nitric acid

ABSTRACT: An attempt was made to work out a technique which would make it possible to minimize the error introduced by the period of mixing of the reagents in exothermic reactions. To this end, use was made of the reaction of hexamethylenetetramine or its dinitrate with anhydrous nitric acid (which yields cyclotrimethylenetrinitroamine). The heat of reaction is 88.0 kcal/mole when hexamethylenetetramine is used, and 41.7 kcal/mole when its dinitrate is employed; to eliminate the overheating (which would raise the reaction temperature to 160°C for hexamethylenetetramine), the reagents were first cooled. A method is given for calculating the "equivalent time of mixing" τ eq, i.e., the reaction time at a constant temperature T_1 required for the desired concentration of the product c_1 .

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ACC NR: AP6008099

to be formed, and it is shown that this method can indeed be used for reducing the errors introduced by the period of mixing of the components in studies of the kinetics of fast exothermic reactions. Orig. art. has: 5 figures and 4 formulas.

SUB CODE: 07 / SUBM DATE: 01Nov64 / OTH REF: 004

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(C)

SHUTOV, I.; FIREVICH, A.

Chemical method for controlling tree sprouts in roadside ditches.
Avt.transp. 32 no.6:27-28 Je '54. (MLRA 7:9)
(Herbicides)

SHUTOV, I.

Organization of hauling produce to collective farm market. Sov.
torg. no. 7:47-49 Jl '58. (MIRA 11:7)
(Odessa--Farm produce--Marketing)